GSM/GPRS/GPS Tracker **GL100M**

User Manual

TRACGL100MUM001

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Contents

Contents 2
0. Revision history 3
1. Introduction 4
2. Product Overview 5
    2.1. Appearance 5
    2.2. Buttons/Mini USB Interface Description 5
    2.3. Two Triple-Color LEDs Description 6
3. Getting Started 7
    3.1. Parts List 7
    3.2. Battery Charging 8
    3.3. Install SIM Card 8
    3.4. Turn on/Turn off 9
    3.5. Operating on function key 9
4. Troubleshooting and Safety info 10
    4.1. Troubleshooting 10
    4.2. Safety info 11

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0. Revision history

Revision	Date	Author	Description of change
1.00	2011-09-16	Cid Xu	Initial

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1. Introduction

GL100M is a powerful GPS locator which is designed for vehicle, pets and asserts tracking. With superior receiving sensitivity, fast TTFF and GSM frequencies 850/900/1800/1900. Its location can be real time or schedule tracked by backend server or specified terminals. Based on the embedded @Track protocol, GL100M can communicate with the backend server through GPRS/GSM network, and transfer reports of emergency, Geo-fencing, device status and scheduled GPS position etc… Service provider is easy to setup their tracking platform based on the functional @Track protocol.

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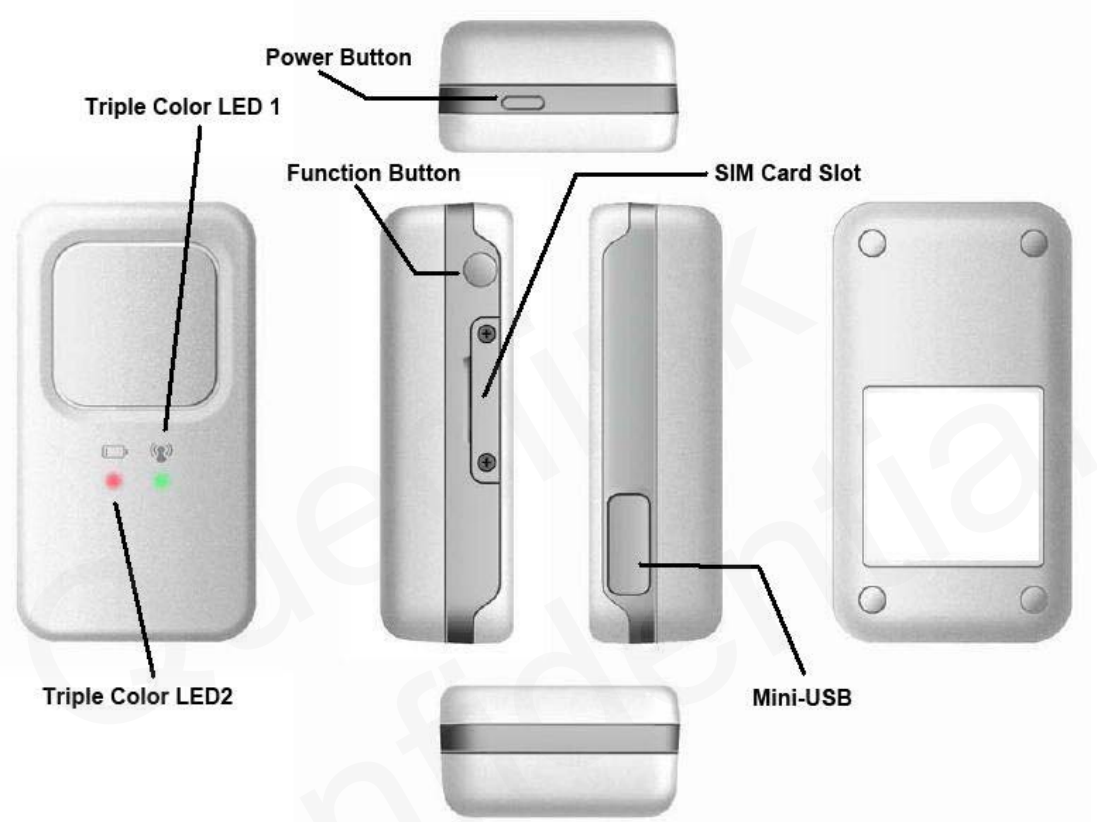
2. Product Overview

2.1. Appearance



2.2. Buttons/Mini USB Interface Description

Button /Mini USB Interface Description	
Power Key	● Turn on GL100M ● Turn off GL100M (If power key is enabled).
Function Key	● Geo-Fence mode Long press the key to enable/disable Geo-Fence ID0 ● Geo-Fence in current position mode Long press the key to enable/disable Geo-Fence ID0. If enable Geo-Fence ID0, using the current position as the centre of Geo-Fence 0. ● SOS mode (default)

	Long press the key to active SOS alarm
Mini USB interface	● Plug in the AC-DC power adapter to this interface for charging battery. ● Backend server developer or administrator can use the Data_Cable_M to configure GL100M.

2.3. Two Triple-Color LEDs Description

There are two triple-color LEDs in GL100M. Each LED shows red, green and blue to indicate different state of GL100M. For better understanding, we call them **Red LED 1, Green LED 1, Blue LED 1** and **Red LED 2, Green LED 2, Blue LED 2**.

Light	Color	event	State
LED1	Red	The power key has been pressed	light, It will be off after the key released.
		The device receives a valid command	light
		When power on the terminal	light for about 2 seconds
		When power off the terminal	slow flash(about 2s once) until the terminal is off.
	Green	network searching	fast flash
		network has been registered	slow flash
		SIM pin locked	ever-light
	Blue	GPS is in fixing	fast flash
		GPS has fixed	ever-light for about 4 seconds
LED2	Red	The device is in charging	fast flash
		When the battery in low status	slow flash(about 2s)
	Green	charging has completed	ever-light
		After inserting the charger	light for 4 seconds to indicate the battery status is checked
	Blue	The function key has been pressed	the blue led2 will be light when the function key is pressed. It will be off after the function key released or the corresponding event (SOS event or Gen-Fence 0 switch) generated because of the key pressed for 3 seconds.

3. Getting Started

3.1. Parts List

Name	Picture	Remark
GL100M Locater		The GSM/GPRS/GPS locator.
AC-DC Power Adapter (Standard accessory)		It is used to charge the internal battery of GL100M.
Screw Driver (Standard accessory)		It is used to twist off/ tighten the two screws on the side of GL100M when install SIM card.
GL100M Sheath (Optional accessory)		It is used to attach the GL100M to belt.
Car Cigarette Charger (Optional accessory)		It is used to power the GL100M with the cigarette power output on the vehicle.
Car Kit Charger (Optional accessory)		It is used to power the GL100M with the battery output on the vehicle.

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GL100M Data Cable_M (Optional accessory)		It the USB data cable which can be used for firmware upgrading and configuration.
GL100M Holder Without Magnet (Optional accessory)		It is used to hold the GL100M, mount to somewhere with the screw.
GL100M Holder With Magnet (Optional accessory)		It is used to hold the GL100M, attached to metal with the magnet on it.

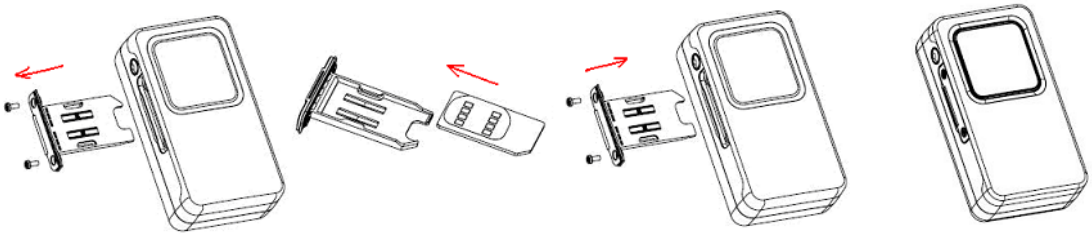
3.2. Battery Charging

- Please connect AC-DC power adapter with GL100M.
- Insert the AC-DC power adapter into the power socket.
- During charging, the **Red LED 2** is blinking quickly. When the battery is full charged, the **Green LED 2** will be solid.
- You can also charge the battery by USB cable which connects GL100M with the PC.
- Charging time is about 4 hours.

Note: Before the first time using GL100M, please full charge the battery.

3.3. Install SIM Card

- Use a screw driver to twist off the two screws on the side of GL100M.
- Then remove the screws and SIM cover.
- Insert the SIM card into the SIM cover according to the direction shown.
- Finally, put the SIM cover into the SIM slot and tighten screws.



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3.4. Turn on/Turn off

- Turn on: Press the Power key at least 3 seconds and release it to turn on GL100M. At the same time, **Red LED 1** will light on for 2~3 seconds. Then **Green LED 1** starts to blink quickly which means searching the GSM network. After the GSM network is registered, it turns to be slow blinking.
- Turn off: Press the Power key at least 3 seconds; **Red LED 1** will slow flash until the terminal is off. Please note the end-user can not power off GL100M when the power key is disabled by protocol.

3.5. Operating on function key

- First please make sure the function key is enabled.
- When the function key is in Geo-Fence mode and the function key is enabled. To long press the function key will enable/disable the Geo-Fence 0.

  Note: "*Check interval*", "*Central Point*" and "*Radius*" of Geo-Fence0 shall be preset.

- When the function key is in SOS mode, after long press for 3 seconds, the device will report the current position according to the result of the latest GPS fixing and then start GPS fixing. After the GPS fixing finishes or timeout, the device will report the SOS message according the result of the GPS fixing..

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4. Troubleshooting and Safety info

4.1. Troubleshooting

Trouble	Possible Reason	Solution
After GL100M is turned on, the Green LED 1 flashes quickly always.	The SIM card is not inserted.	Please insert the SIM card into GL100M.
	The signal is too weak; GL100M can't register to the network.	Please move GL100M into place with good GSM coverage.
	System do not support hot plug.	Before power on the terminal, insert the SIM card first.
Messages can't be reported to the backend server by GPRS.	The SIM card in GL100M doesn't support GPRS.	Try a GPRS supported SIM card.
	APN is wrong. Some APN can not visit the internet directly.	Ask the network operator for the right APN.
	The IP address or port of the backend server is wrong.	Make sure the IP address for the backend server is an identified address in the internet.
Unable to power off GL100M.	The function of power key was disabled by AT+GTFKS.	Enable the function of power key by AT+GTFKS.
	Unable to power off GL100M if charger connected.	Disconnect charger, and try again.
GL100M is turned on after insert a charging cable.	The function of full power up was enabled by AT+GTFKS.	Disable the function of full power up by AT+GTFKS.
No response from UART when configure GL100M through UART	GL100M is in power saving mode.	Remove the Data_Cable_M, and plug it in again. After this operation, GL100M will exit from power saving mode for 10 seconds.
GL100M can't get successful GPS fixing.	The GPS signal is weak.	Please move GL100M to a place with open sky.
		It is better to let the top surface face to sky. (The same surface with indication LED)
		GL100M will stop GPS if it can't get GPS fixing in 3 minutes (except in GPS open always mode). So please make sure the GPS signal is good

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		enough when doing the first time of GPS fixing.

4.2. Safety info

- Please do not disassemble the device by yourself.
- Please do not put the device on the overheating or too humid place, avoid exposure to direct sunlight. Too high temperature will damage the device or even cause the battery explosion.
- Please do not use GL100M on the airplane or near medical equipment.

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